### **TA-E731X**

### **SERVICE MANUAL**

US Model

- This set is almost the same as model TA-E721 (US) previously produced.
   Therefore, see the service manual for the information which is not contained in this service manual
- This set is the AV control amplifier section in SEN-V100CD.

 Items marked "\*" are not stocked since they are seldom required for routine service. Some should be anticipated when ordering these items.

### Page 31 4-1. FRONT PANEL SECTION

TA-E721 (US)			TA-E731X (US)			
Ref. No. Part No. 3 X-4942-294-1	Description PANEL ASSY, FRONT	Remark	Ref. No. 3		<u>Description</u> PANEL ASSY, FRONT	<u>Remark</u>

### Page 32 4-2. BACK PANEL SECTION

TA-E721 (US)					TA-E731X (US)		
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*57	4-945-755-41	PANEL, BACK		<b>*</b> 57	4-945-755-81	PANEL, BACK	

### Page 41 ACCESSORIES & PACKING MATERIALS

TA-E721 (US)			TA-E731X (US)				
Ref. No.		<u>Description</u> COMMANDER, STANDARD (RM MANUAL, INSTRUCTION (ENGI	- ,	Ref. No.		<u>Description</u> COMMANDER, STANDARD (RI MANUAL, INSTRUCTION (ENG	,
*	4-931-988-41	INDIVIDUAL CARTON		*	4-931-988-81	INDIVIDUAL CARTON	



English 93H0929-1D Printed in Japan © 1993.8

### TA-E721

### **SERVICE MANUAL**

Canadian Model E Model

US Model



### **SPECIFICATIONS**

### **Amplifier section**

Harmonic distortion (Front)

Less than 0.02% (at 1 kHz, 1.0 V,

Surround off)

Frequency response (Surround off)

PHONO: RIAA equalization curve ±1.0 dB

TUNER, CD, ADAPTOR, TAPE/DAT,

VIDEO 1, 2, 3/LD, 4: 20 Hz - 70 kHz ±1.5 dB

### Video section

Video input/output

Permissible signal input level

VIDEO 1, 2, 3/LD, 4: 1.5 Vp-p

Output signal level

VIDEO 1, 2, MONITOR: 1 +0.1 Vp-p

(with 1 Vp-p input, measured at MONITOR

OUT)

Impedance (output)

75-ohm unbalanced, negative sync.

### **Audio section**

Input

Input jack	Jack type	Sensitivity	Impedance
PHONO (MM)	Phono	2.0 mV	50 kilohms
TUNER, CD, TAPE/DAT, VIDEO 1, 2, 3/LD, 4, ADAPTOR IN	Phono	150 mV	50 kilohms

Output

Output jack	Jack type	Sensitivity	Impedance
TAPE/DAT, VIDEO 1, 2, ADAPTOR OUT	Phono	150 mV	470 ohms
FRONT, REAR, CENTER	Phono	1.0 V	1 kilohms

Tone controls

BASS: ±7 dB (100 Hz)

TREBLE: ±8 dB (10 kHz)

Dolby input sensitivity

500 mV

### General

Power requirements

120V AC, 60Hz (US, Canadian)

120V-220V-240V AC adjustable, 50/60Hz (E)

Power consumption

18W (US, Canadian)

17W (E)

AC outlets

4 switched, 480 W/4A max.

**Dimensions** Approx. 430 x 105 x 295 mm (w/h/d)

> $(17 \times 4^{1}/_{4} \times 11^{5}/_{8} \text{ inches})$ (including projecting parts and controls.)

Weight Approx. 3.5 kg (7 lb 12 oz)

Accessories supplied

Power amp control cord (1) Audio connecting cord (2) Remote commander RM-P312 (1) Sony Batteries SUM-3 (NS) (2)

Design and specifications are subject to change without notice.

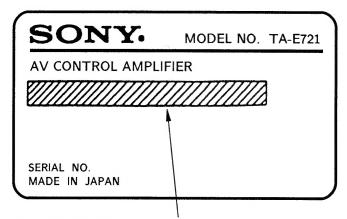


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### MODEL IDENTIFICATION

- Specification Label -



US, Canadian Model: AC: 120V 60Hz 18W

E Model: AC: 120/220/240V ~ 50/60Hz 17W

### **SAFETY CHECK-OUT**

After correcting the original service problem, perform the following safety check before releasing the set to the customer:

Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

### LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers.).

Leakage current can be measured by any one of three methods

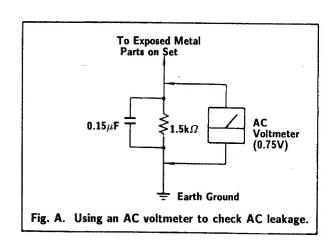
- A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
- A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
- 3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

### **SAFETY-RELATED COMPONENT WARNING!!**

COMPONENTS IDENTIFIED BY MARK A OR DOTTED LINE WITH MARK A ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

### ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE A SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.



Connections

Connect the AC power cord last. Make sure power is off.

Cord plugs and jacks are color coded. Red plugs and jacks are for right channel (R) of the FNONT OUTPUT terminals. And also, red plugs and jacks are for REAR reminal and white ones for CENTER terminal.

The cable connectors should be fully inserted into the jacks. A loose connection may cause

The numbers correspond to the following details on page 6.

hum and noise.

SECTION

This section is extracted from instruction manual.

GENERAL

VOR 1 VCR 2 to AUDIO/ VIDEO OUT 0 VMC-1S (not supplied 0 0 RK-C74 (not supplied to AUDIO/ الظي to AUDIO/VIDEO OUT 8 VCR 3 or LD player

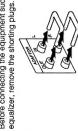
A-E721 to LINE OUT to LINE OUT RK-C74 (not supplied) 6 6 Connecting Audio Equipment to LINE OUT to LINE OUT Turntable system CD player Tuner

4

### /

### Connections

### Before connecting the equipment such as a graphic Connecting a graphic equalizer, etc.



When the equipment such as a graphic equalizer is not connected, be sure to install the shorting plugs. Otherwise, no sound is heard from the speakers.

## Power amp control cord (supplied)

Connect the POWER AMP CONTROL OUT jack on the rear to the POWER AMP CONTROL IN jack of the AV power amplifier TA-N721. The output of the AV power amplifier is controlled by the unit. 0



To disconnect, pull it out

by grasping both sides of the plug.

Push in until it clicks.

To disconnect, pull it out by grasping both sides of

the plug. Push in until it clicks.

## **@** AC OUTLETS (SWITCHED)

Use these to power audio component whose total power consumption is less than the wattage indicated on the AC outlets.

These outlets are controlled by the SYSTEM POWER switch

### CAUTION

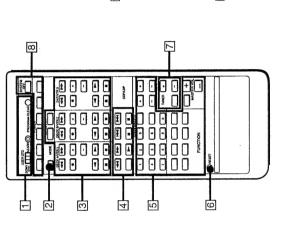
Do not connect any electrical home appliances such as an electric iron, fan, TV or other high wattage equipment to these AC outlets.

**6** Power cord Connect to a wall outlet.

## Remote Commander

- When you manipulate buttons on the commander, be sure to point the head of the commander toward the remote control sensor on the front of the AV control amplifier.
  - and the head of the commander, the AV control amplifier If there is an obstacle between the AV control amplifier may not be controlled remotely.

## Programmable Remote Commander RM-P312



selector is set to SONY STD (Sony standard), buttons on the The RM-P312 can "learn" various functions of other remote commanders which use infrared rays. When the mode RM-P312 can be used to perform the functions below:

## T Program control section

USER STD: To control equipment whose remote control Mode selector and indicator SONY STD: To control Sony equipment. functions are stored.

LEARN: To store functions of other remote commanders PROGRAM CLEAR button: Clears the stored functions. emitting infrared rays.

### 2 MODE selector

- 1: To select the functions indicated in light gray such as Selects the function mode on the remote commander. DECK, DAT, CD player and surround mode of
- 2. To select the functions indicated in blue such as VCR, LDP (Laser disc player) and TV.

## 3 Tape deck/DAT/VCR control section

ANT (antenna) TV/VTR buttons: Selects the output signal from the antenna terminal on the VCR, either a TV signal or VCR programs.

VTR CH (channel) +/- buttons: Select channel on the

←
Fast winding or forwarding Recording

√ P: Play

REC MODE REV/FWD buttons:

For reverse recording, press REV and • together. For forward recording, press FWD and • together.

## 4 CD/LD player control section

The combined CD/LD player can be controlled with LDP D.(disc) SKIP: Disc skip (for a CD player equipped with position.

Play

a multi-disc changer)

: Pause

Stop

▲▲/▶▶: Manual search (only for LD player) \*\* Locates a desired selection.

### 5 Amplifier/TV section

TV/VIDEO button: Selects the input signal of the TV. (for TV)

Program number (1 to 0) and ENTER buttons: Select SURROUND mode selectors the channel. (for TV)

(for the AV control amplifier)

T.(test) TONE: Outputs test tone to each speakers in ON/OFF: Turns on/off the surround mode. MODE: Selects the surround mode.

CENTER VOL /TV VOL +/- buttons: Control the volume FUNCTION selectors: Select an input source of the AV of center speaker or TV. (The CENTER VOL +/-buttons function for the AV control amplifier.) control amplifier. (for the AV control amplifier) DELAY: Adjusts the delay time.

rear speakers or channel of TV. (The REAR VOL +/-REAR VOL /TV CH +/- buttons: Control the volume of DBFB button: Turns on/off the DBFB (Dynamic Bass buttons function for the AV control amplifier.

Feed Back), (for the AV control amplifier) MASTER VOL +/- buttons: Control the amplifier's master volume. (for the AV control amplifier)

audio system remote control.

Connect to the CONTROL S IN jack of other Sony equipment with the flat remote control cord for whole

Flat remote control cord (not supplied)

Listening to/Watching

Program Sources

Basic Operation

## Remote Commander

### 6 Reset button

Reset the commander to the initial state.

### 7 Tuner control section

PRESET +/- buttons: Select a preset station. SHIFT button: Selects a memory page.

### B Power control section

SYSTEM OFF button: Turns off the power of the whole system: LDP, VGR, TV, and AUDIO. LDPA/TRA/TYARJAUDIO POWER buttons: Control the power of each unit.

### Inserting the Batteries

Insert two size-AA (R6) batteries with correct polarity. ด



0 

## If your recorder is of such type as pressing ● puts it in recording pause mode, first press ● on this commander and then II. Note on the ● (recording) button under ③ Tape deck/

DAT/VCR control section

When the batteries are exhausted, the commander can no longer operate the unit. Replace both batteries with new ones. About half a year of normal operation can be expected when using the Sony SUM-3 (NS) batteries.

The AIP (Diay) buttons in 3 and 4 and the SHIFT button and PRESET +/- buttons in 17 can function without pressing one of the FUNCTION buttons in 5 in the following cases:

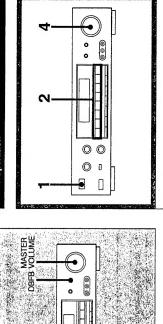
When the CD player is connected to the CD jacks
 When the tabe deck is connected to the TAPE jacks
 When the video deck is connected to the VIDEO 1 jacks
 which the MODE on the remote commander to VIF 1).

To avoid battery leakage
When the commander is not to be used for a long period of time, remove the batteries to avoid damage caused by battery leakage and corrosion.

To avoid malfunction of the remote commander Avoid keeping the commander under extremely hot or

humid location.

## Adjusting the Sound



Press the SYSTEM POWER switch to turn on the unit.

2 Select a program source.

94040	4.	
TUNER	\$6 4	
8		
TAPEDAT		E
KOMU WOOK TAPEBAT		
VIDEO 34D		
V0502 W	ű.	
10801		

3 Play the program source.

4 Adjust the volume.

MASTER VOLUME

Open the cover.



To increase the volume, turn the MASTER VOLUME control To decrease it, turn the control counterclockwise.

furn down the volume before switching on the unit. This prevents damage to speakers.

## Adjusting Left and Right Sound Balance

Adjust BALANCE control to correct stereo imaging when the speaker position is not symmetrical.

## Adjusting the Tone from the Front Speakers

To enhance treble or bass sound from the front speakers, To attenuate them, turn the TREBLE or BASS control turn the TREBLE or BASS control clockwise.

### Reinforcing the Bass

To obtain powerful bass sound, press DBFB (Dynamic Bass Feed Back) button. The indicator on the display lights up.

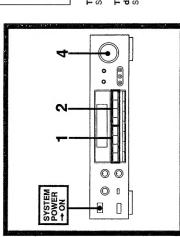
# **Listening to/Watching Program Sources**

## Combining the Video Image with the Sound from Another Program Source

The unit allows you to combine a video image with sound from another audio program source as back ground music.

MASTER VOLUME

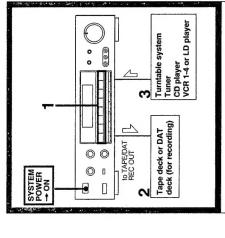
4 Adjust the volume.



To cancel the combining function Select the desired video source again.

To watch a video source with the MONITOR number displayed on the monitor TV Select the video source with FUNCTION selectors.

## Recording Audio Program Source



Set the tape deck or DAT deck to the recording 4 Y Select a program source. 2

3 Play the selected program source.

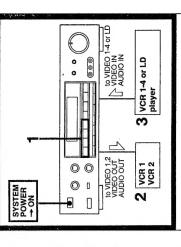
mode.

3 Play both the video and audio program sources.

The settings of the MASTER VOLUME, TONE, DBFB, SURROUND, and BALANCE controls do not have any effect on recording.

## **Recording Video Program** Source

You can operate two or more video or tape decks for recording at the same time as the audio (and video) signals of the program source are output simultaneously through all recording output jacks.



2 Set the VCR 1 or VCR 2 in the recording mode.

Select a video source for VCR 1-4 or LD player.

VIDEO 1 | VIDEO 2 | VIDEO 2/LD | VIDEO 4 | TA

な意味

Play the selected program source က

## To record onto two tapes at a time - simultaneous

**recording** Set both the VCR 1 and VCR 2 to the recording mode.

## tape The audio signal of the program source selected by the FUNCTION selectors is always output from the TAPE/DAT jacks. Set the tape (or DAT) deck connected to the TAPE DAT jacks to the recording mode. To record audio signal of video source onto a cassette

**Note**Recording can be performed with a VCR except the VCR or LD player for playback.

### 9

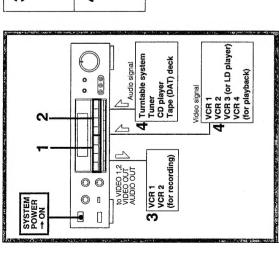
Select a video source.

7

2 Select an audio source.

# Editing Audio/Video Program Sources

During video tape editing, you can add the desired sound on the recording-side video tape from audio or video program source.



Select a video source for VCR 1, VCR 2, VCR 3 (or LD player), or VCR 4 except the VCR for recording.

VIDEO 1 VIDEO 2 VIDEO 30LD VIDEO 4 178

2 Select an audio source.

3 Set the VCR 1 or VCR 2 (for recording) to the 4 Play both the selected program sources. recording mode.

# Getting Ready to Enjoy Surround Sound

## Basic Surround System

Two front and two rear speakers are necessary to enjoy the surround function.

### Rear speaker (R) for surround effect Front speaker (R) °O(^) Location of the rear speaker system Front speaker (L) ∞O) Rear speaker (L) for surround effect

## Selecting surround modes

Expands sound just like listening to it in a movie theater. DOLBY\* (Dolby Surround)

### DOLBY PRO LOGIC

The Dolby Pro Logic Surround Decoder which has the same functions for playback, such as movie theaters and gives a theater-like experience in your listening room, naturally reproducing the audio sound field.

### HALL (Hall Surround)

Provides reverberation effect that is produced in a concert

## **SIMULATED** (Simulated Surround) Gives a simulated stereo effect to monaural sound.

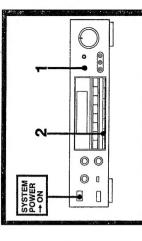
To turn on or off the surround mode Press the SURROUND button.

No sound will be heard from the surround speakers, when the SURROUND button is set to off.

Manufactured under license from Dolby Laboratories Licensing Corporation. Additionally licensed under one or more of the following patients. U.S. numbers 3,652,868, 3,745,792 and 3,395,590. Canadian numbers 1,004,603 and 1,037,877. "DOLBY" and the double-D symbol ID are trademarks of Dolby Laboratories Licensing Corporation. DD box or sussection decoder reproduces the specially encoded surround sound of Dolby surround video programs.

## Selecting the Speaker Operation Mode in the Dolby Pro Logic Function

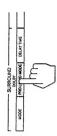
One center speaker is required in addition to the basic four speakers for the Dolby Pro Logic surround system. In the DOLBY surround mode, a speaker operation mode can be selected to match your speaker system. Press PRO LOGIC MODE button to select the appropriate



SURROUND

Press the SURROUND button so that the SURROUND ON/OFF indicators in the display window shift over to ON.

2 Select the DOLBY PRO LOGIC mode according to your speaker system.



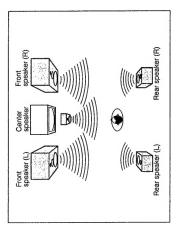
Each time the PRO LOGIC MODE button is pressed, the DOLBY PRO LOGIC mode is changed in the following order:

→NORMAL → WIDE → 3 CH. → PHANTOM—]

7

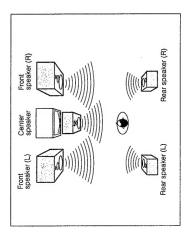
# Getting Ready to Enjoy Surround Sound

When connecting smaller speaker than front speakers, such as that of TV for a center speaker. The bass sound of the center channel is output from the front speakers, as small speaker cannot produce enough bass.



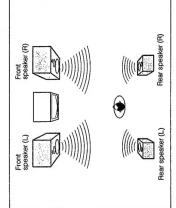
### WIDE mode

When connecting the same size of speaker as front speakers for a center speaker.



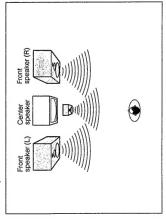
### PHANTOM mode

When connecting only front and rear speakers. The sound of the center channel can be heard from the front speakers.



### 3 CH. mode

When connecting front speakers and a center speaker. The sound of the rear channels can be heard from the front speakers.



2 Select the DOLBY surround mode.

The amount of the DBFB effect varies according to the Dolby Pro Logic mode.

## Adjusting the Surround Level for Dolby Surround System

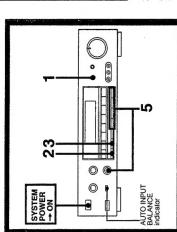
**5** Adjust the sound level of front, rear speakers and a center speaker.

For rear speakers For center speaker

For front speakers

, CENTER LEVEL ,

- REAR LEVEL -



### **Automatic Input Balance**

Press the T.TONE button on the remote commander again to set to off.

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The display window has level indicators for rear speakers The input balance is automatically adjusted. When the adjustment is completed, the AUTO INPUT BALANCE indicator lights up.

and center speaker. When distorted sound is seem to be output from the rear speakers or center speaker, adjust their levels independently so that the peaks of the signal levels may not reach the orange section.

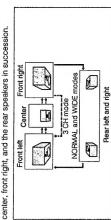
SURROUND ON/OFF indicators in the display window shift over to ON.

SURROUND

Press the SURROUND button so that the

### Sequence of the test tone

In a system with a center speaker: The test tone will be output automatically from the front left,



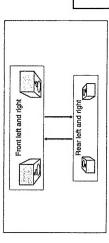
3 Select the DOLBY PRO LOGIC mode according

to your speaker system.

SURROUND DOURY DOUR THE

MODE

In a system without a center speaker: The test tone will be output automatically from the front speakers and rear speakers alternately.



## 4 Press the T.TONE button on the remote

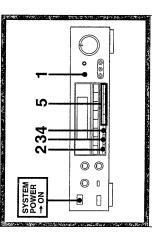
commander. (The T.TONE function is available only with the remote commander.)

### 15

## **Enjoying Surround Sound**

## Listening to with Surround Effect

The unit has three surround modes, DOLBY, HALL, and SIMULLATED which have been present in the factory. You can enjoy the surround sound effects by just selecting the surround mode according to the program source.



Adjust the level of the rear speakers and center speaker.

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For rear speakers

Press the SURROUND button so that the SURROUND ON/OFF indicators in the display window shift over to ON.

\_\_\_\_ CENTER LEVEL \_\_\_\_\_ For center speaker



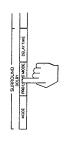
Select a surround mode: DOLBY, HALL, or SIMULATED.

N

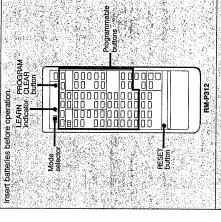
To turn off the surround effect
Press SURROUND button again.
The normal sound without surround effect will resume.



Select the DOLBY PRO LOGIC mode according to your speaker system. က







Remove your finger(s) from the button(s) after the LEARN indicator goes off.

4

Other manufacturer's remote commander

-3,4 Other manufacturer's remote commander Approx. 5 cm (2 inches)

6 Set the mode selector to USER STD or SONY STD.

SONY THE

Repeat operation for each button to be programmed.

Ŋ

After programming Be sure to test if the equipment really works with the

programmed signals.

Number of signals that the commander can learn It depends on the format of the signal. If you program signals of Sorty equipment, approximately 50 – 60 signals can be programmed.

## Programming Signals of Other Audio/Video Equipment with RM-P312

Advanced Operating with the Remote Commander

Set the mode selector to LEARN.

- LEARN

The RM-P312 can learn various functions of other remote commanders emitting infrared rays and allows you to control most of audio and video equipment from a distance.

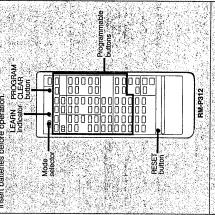
Press and hold the button which shall "learn" the remote-control signal until the LEARN indicator

lights up.

N

CO LEARN-

RM-P312



3 Press and hold the button of other manufacturer's remote commander whose signal is to be learned.

The two remote commanders must:

• be placed straight and head to head.

• be placed at a distance of approx. 5 cm (2 inches).

• not be moved during the programming operation.

\_\_2,4

Programmable Remote Commander RM-P312 **LEARN** indicator

# Advanced Operating with the Remote Commander

## If the LEARN indicator flashes or does not go out in

The memory capacity has become full. This occurs when other signals stronger than the remote-control signals have noisy environment or the remote commanders were placed been stored because the signals were programmed in a

 Clear all the signals following the procedure on the right and program again from the beginning under the proper too far apart from each other.

### Notes on programming

- system. Since the programmable commander can "learn" only the signals output from another remote commander, other than Sony can be programmed only when they are compatible with the infrared wireless remote control it cannot control equipment that does not use a remote Remote-control signals of equipment of manufacturers commander. Also, note that there are some special
- Do not attempt to use the programmable commander with an air conditioner or other household appliances. remote-control signals that cannot be programmed.

### Controlling Equipment

By switching the mode selector as shown below, a single button alternately controls Sony equipment and another manufacturer equipment.

## To control Sony equipment



## To control equipment with programmed signals



## Program the signal in the same way as for equipment from other manufacturers. In this case, even with Sony equipment, set the mode selector to USER STD. When Sony equipment cannot be remote-controlled

### Note on battery

When the batteries are exhausted, the remote commander can no longer operate the unit or programming becomes If the LEARN indicator does not light when a button is pressed, the batteries are almost exhausted.

recommend the use of alkaline batteries for prolonged use. If this happens, replace both batteries with new ones. We

If no signal has been programmed

The programmable commander can control Sony equipment even when the mode selector is set to USER STD.

## If the equipment works incorrectly Press RESET.

The programmed contents of the buttons are not cleared by pressing RESET

## To Program a New Signal onto a Previously Programmed Button

The previously programmed signal is cleared and replaced by the new signal. Follow the programming procedure.

To clear all programmed signals
1 Set the mode selector to LEARN.
2 Press and hold any button of the programmable area until

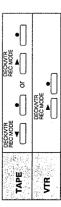
the LEARN indicator lights up.

3 Press PROGRAM CLEAR until the LEARN indicator flashes and goes off.

## It is not possible to clear the programmed content of just one button.

Note

It is not possible to operate any equipment with only the • REC button. To program a signal under the • REC button, press and hold the following buttons at the same time in To program a signal onto the 
REC button in the TAPE

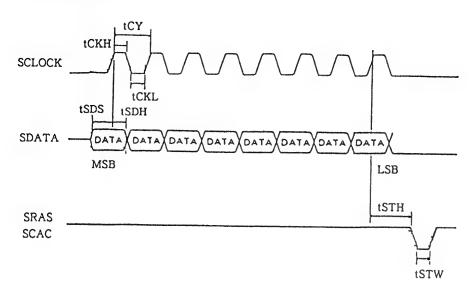


### 9

### SECTION 2 IC PIN FUNCTION

### 2-1. DESCRIPTION ON IC303 (LV1001M)

Pin No.	Explanations
1	De-couple capacitor for threshold voltage
2, 64	Capacitor for smoothing of rectifier output
3	Capacitor for sliding band filter and Delayed output
4, 62	Capacitor for sliding band filter
5, 61	Capacitor for pre-emphasis
6, 60	Input filter for rectifier
7, 57	Input filter for rectifier
8	Reference voltage
9	Reference voltage
10	Mute control
11	Vcc
12	Output for V <sub>DD</sub>
13	Clock input for serial input, data input for parallel input mode
14	Data input for serial input, data input for parallel input mode
15	Column address selection for serial input, data input for parallel input mode
16	Row address selection for serial input, data input for parallel input mode
18 to 32 24	Connection to memory device
33	Vss X'tal resonator for oscillator
34	X'tal resonator for oscillator
35	Long or Short mode selection
36	Serial or Parallal mode selection
37	For test mode
38	Smoothing for NR rectifier
39	Smoothing for NR rectifier
40	Capacitor for weighting on side chain path
41	Input for variable resistor
42	NR output
43	7kHz low pass filter output
44	Input for NR
45	Capacitor for de-couple on NR
46	Delay output or NR output
47	Input for mute circuit
48	Output for mute circuit
49	Output for 7kHz low pass filter
50	Input for 7kHz low pass filter
51	GND
52	Input for right channel
53	Input for left channel
54	Capacitor for de-couple on Fixed matrix output
55	Noise shaping and delay input
56	Noise shaping output
57	Delay input signal mode select switch $(L+R/L-R)$
58	Filter for supply voltage on comparator
63	Capacitor for sliding band filter and local decoder output



In case of short mode, delay time setting is set in above timing. The date loaded to SDATA is written on the leading edge timing. In order to select that the data latch for row address strobe or column address strobe is loaded, SRAS or SCAS port is controlled.

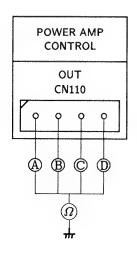
When changing delay time setting, meaningless data on a memory are read. this causes the pop noise, when SRAS or SCAS is controlled, mute circuit (pin 55 is input, pin 56 is output) is activated. Mute time is the same as the delay time which is set at that time. (Serial data input mode only, On parallel data input mode, mute circuit is activated by using the mute control port pin 18.)

On long mode, input data number is 9, the way of setting delay time is same.

### 2-1-1. SERVICE NOTE

CN110 (POWER AMP CONTROL OUT)

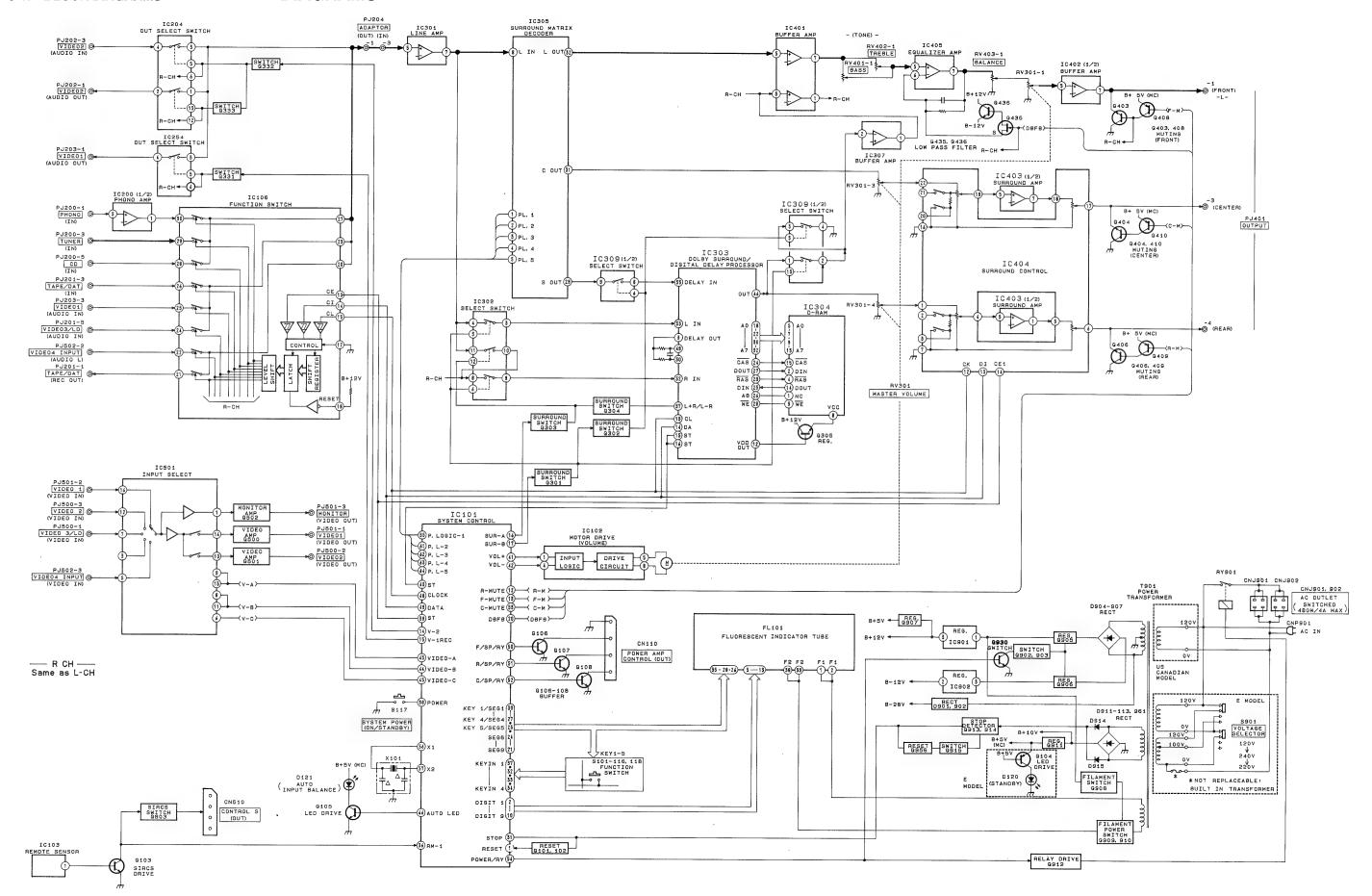
(POWER AMP Unconnected Operation Check)



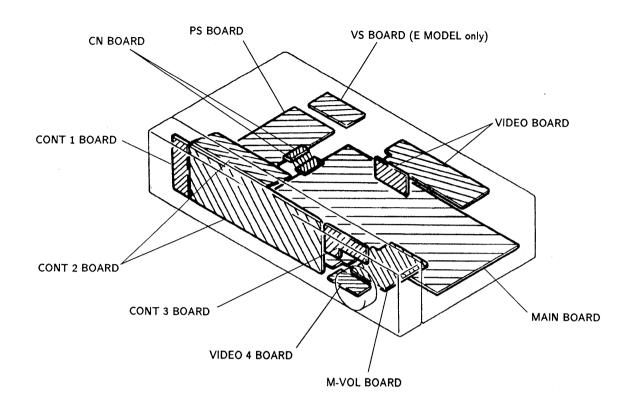
CN101 POWER OFF	POWER ON	ON		DOLBY PI				
	(SURROUND OFF)	PHANTOM	NORMAL	WIDE	зсн	HALL	SIMULATED	
A	0Ω	$0\Omega$	0Ω	0Ω	0Ω	0Ω	0Ω	0.02
B	113Ω	114Ω	114Ω	$\infty\Omega$	$\infty \Omega$	$\infty\Omega$	114Ω	114Ω
© ·	113Ω	114Ω	$\infty\Omega$	$\infty\Omega$	$\infty \Omega$	114Ω	$\infty\Omega$	ωΩ
①	113Ω	$\infty\Omega$	$\infty\Omega$	Ω∞	$\infty\Omega$	$\infty \Omega$	$\infty\Omega$	$\infty\Omega$

### SECTION 3 DIAGRAMS

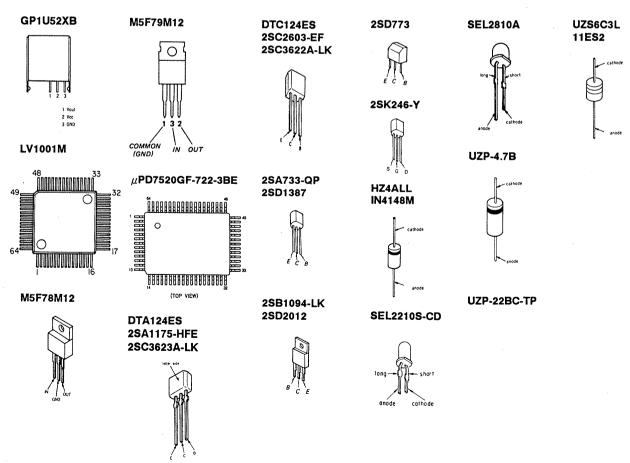
### 3-1. BLOCK DIAGRAMS



### 3-2. CIRCUIT BOARDS LOCATION



### 3-3. SEMICONDUCTOR LEAD LAYOUTS



### 3-4. PRINTED WIRING BOARD — MAIN SECTION —

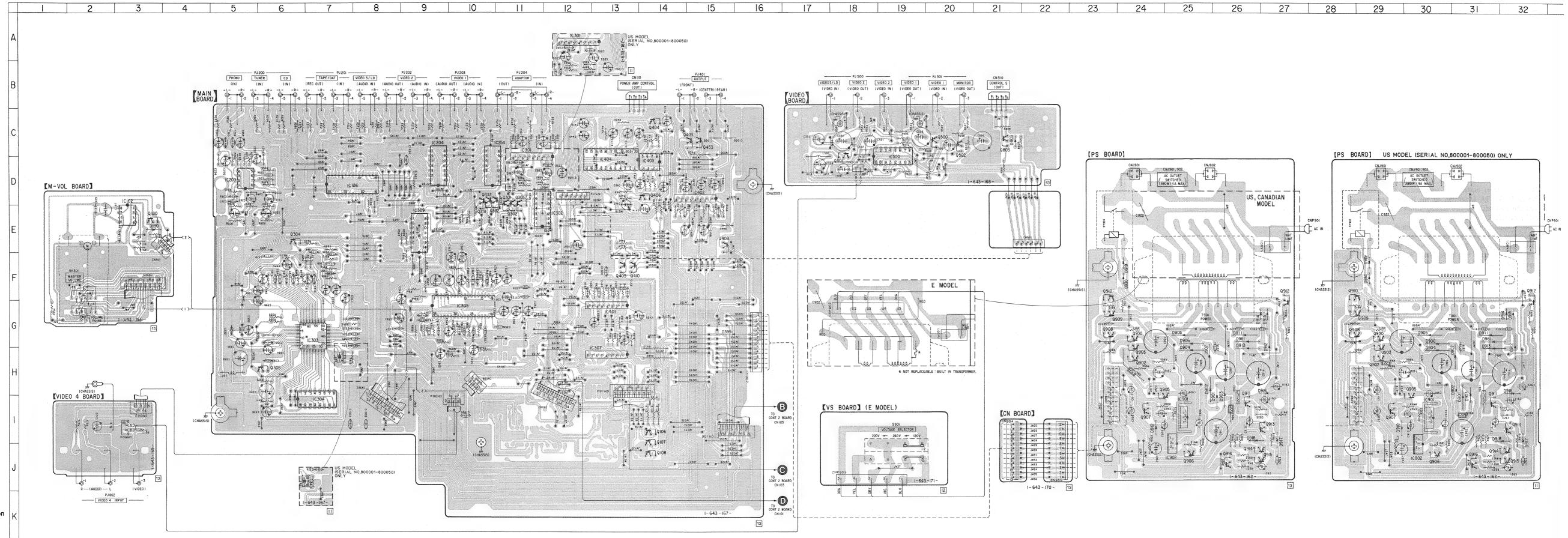
- Refer to page 21 for IC BLOCK DIAGRAM
- Refer to page 16 for Semiconductor Lead Layouts

### SEMICONDUCTOR LOCATION (MAIN/POWER BOARD)

	Board suff	fix number		Board suf	fix number
	-11	-12		-11	-12
Ref. No.	LOCATION	LOCATION	Ref. No.	LOCATION	LOCATION
D130 D399 D803 D901 D902 D903 D904 D905 D906 D907 D910 D911 D912 D913 D914 D915 D916 D917 D918 D919 IC102 IC106 IC200 IC204 IC251 IC302 IC303 IC304 IC305 IC307 IC309 IC401 IC402 IC403 IC404 IC500 IC901 IC901 IC902	E3 G-15 C-21 H-31 H-30 G-30 H-31 H-32 G-32 H-31 G-32 H-32 G-32 H-32 G-32 H-32 G-32 H-32 G-31 H-32 G-32 H-32 H-32 G-31 H-32 G-31 H-32 G-32 H-32 H-32 H-32 H-32 H-32 H-32 H-32 H	1-26 H-25 I-26 H-25 G-25 G-25 H-27 H-26 G-27 H-27 I-27 I-27 I-27 I-27 I-27 I-27 I-27 I	Q100 Q106 Q107 Q108 Q301 Q302 Q303 Q304 Q305 Q331 Q332 Q333 Q404 Q406 Q408 Q409 Q410 Q500 Q501 Q501 Q501 Q502 Q803 Q902 Q903 Q905 Q906 Q907 Q906 Q907 Q911 Q912 Q913 Q914 Q915 Q916 Q916 Q930	E-100 I-14 I-14 I-14 I-14 I-11 I-11 I-11 I-11	H-24 H-24 H-25 J-25 I-24 G-23 I-26 F-27 J-26 J-27 J-26 G-24

### - MAIN SECTION -

- O—: parts extracted from the component side.
- parts mounted on the conductor side.
- o : Jumper wire connected to the ground pattern on the component side.
- \*\*\* : Pattern on the side which is seen.



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### 3-6. SCHEMATIC DIAGRAM -- MAIN SECTION --- MAIN SECTION - Refer to page 21 for IC BLOCK DIAGRAM • All capacitors are in $\mu F$ unless otherwise noted. pF: $\mu \, \dot{\mu} F$ Refer to page 16 for Semiconductor Lead Layouts 50WV or less are not indicated except for electrolytics 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 and tantalums. • All resistors are in $\Omega$ and 1/4W or less unless otherwise specified. • $\triangle$ : internal component. • fwo : fusible resistor. [MAIN BOARD] The components identi- Les composants identifiés par IC401 (2/2) M5218AL fied by mark A or dot- une marque A sont critiques ted line with mark \(\frac{\Lambda}{\Lambda}\) pour la sécurité. are critical for safty. Replace only with part piéce portant le numéro spéci---L-CH--1C301 IC204 number specified. • === : B+ line ₹R465 R466 \$3.3k 39k • ===: B- line PJ203 VIĐEO 1 (AUĐIO IN<sup>-3</sup>(O) · Voltage and waveforms are dc with respect to ground (TUO DIGUA) under no-signal (detuned) conditions. no mark: SURROUND off Position IC106 FUNCTION · ▶ :FWD :REV ■:STOP 12.1 IC402 (2/2) >>:FF <= :REW O:REC SWITCH R452 10k • Voltages are taken with a VOM impedance $10M\Omega$ . ₹R351 \$220k \$220k T 0.022 Voltage variations may be noted due to normal production tolerances. 1C403 (1/2) M5218P Waveforms are taken with a oscilloscope. IC307 Voltage variations may be noted due to normal production tolerances. Signal path. TUNER ⇒ : TUNER ⊏≫: REAR PHONO CENTER) : SURROUND (DELAY) -R-CH-PHONO C255 W W 2.2 R255 R256 S60k 47k IC404 IC102 LB1639 ST.1 OUT2 Vcc 9331 2903400 SWITCH DRIVE CIRCUIT TUNER ⊥ C259 ⊤ 0.022 INPUT LOGIC IN1 GND V CONT IN2 . 7 ≱ R326 22k IC404 LC7535 OUT SELECT SWITCH [VIDEO 4 BOARD] R312 C310 8.2k T560p 22)) IC304 2.1 LM3364K-15 <sup>2</sup>· 25C3623A R313 39k W 5.7° SURROUNÐ C312 W 5.0° SWITCH C800 IC303 IC303 LV1001M ÐIGITAL ÐELAY PROCESSOR R333 22k 1C304 IC302 | IC309 2.4 = 7509 R510 9500 W 2SA733TP-QP V10E0 AMP ≱R504 10k | VI | DEC | OUT | C504 | C505 | C504 | C505 | C504 | C505 5 RS13 RS14 RS13 RS14 100 100 QS02 2SA733TP-QP MONITOR AMP 4. SER ARA CONTROL RESISTOR CNI 10 POWER AMP CONTROL (OUT) [VIDEO BOARD] TO CONT 2 BOARD CN103 B CONT 2 BOARD M-VOL BOARD M-VOL BOARD CN BOARÐ TP

-- 23 -

**— 22 —** 

3-5. IC BLOCK DIAGRAMS

MOISE NOISE MODE

ATTE-NUATOR ANALOG

BALANCE CONTROL

IC304 LM3364K-15

ADDRESS BUFFER

\$\frac{1}{30}\$

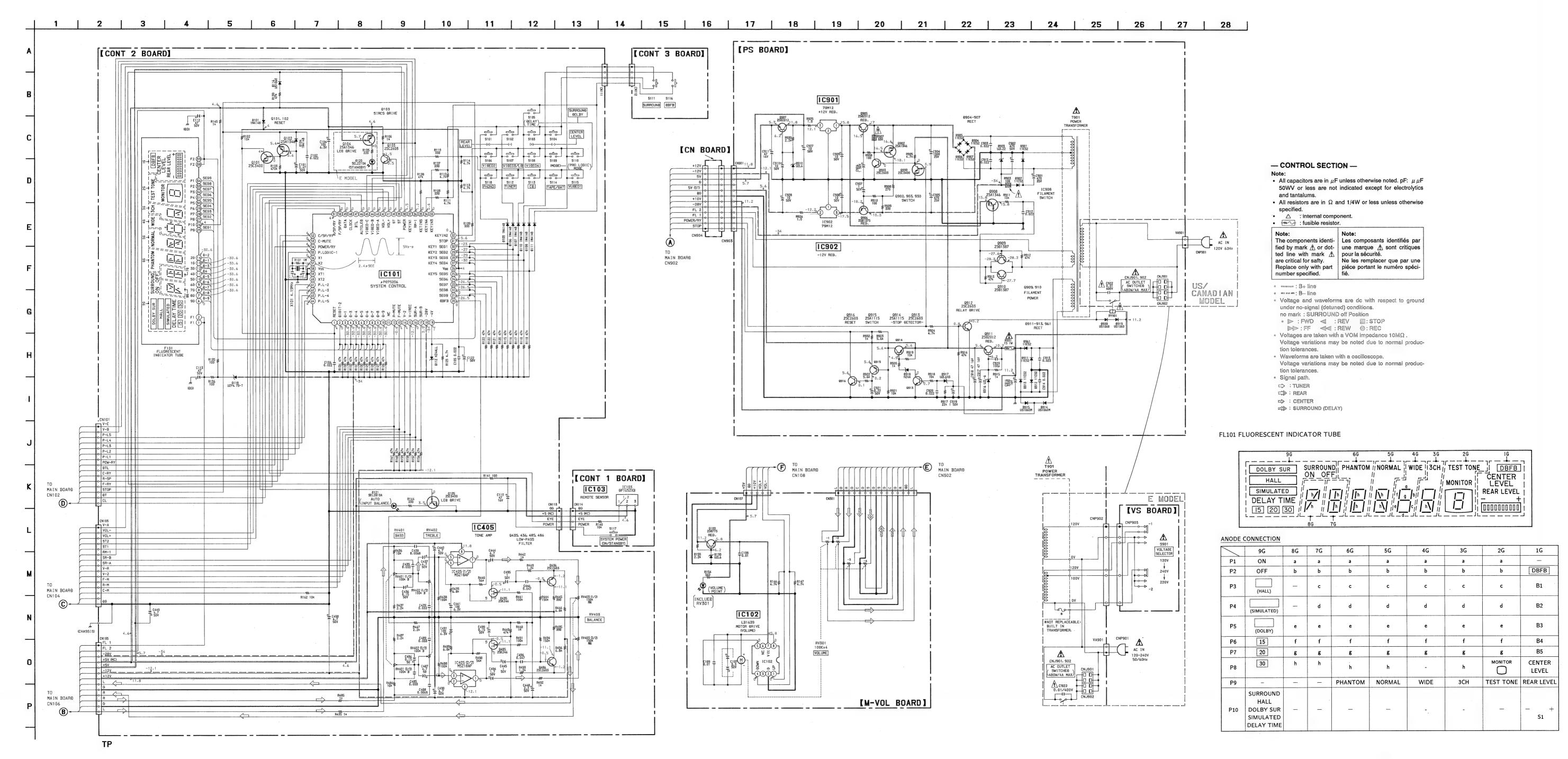
(1) (1)

-21-

IC305 LA7280

### 3-7. SCHEMATIC DIAGRAM — CONTROL SECTION —

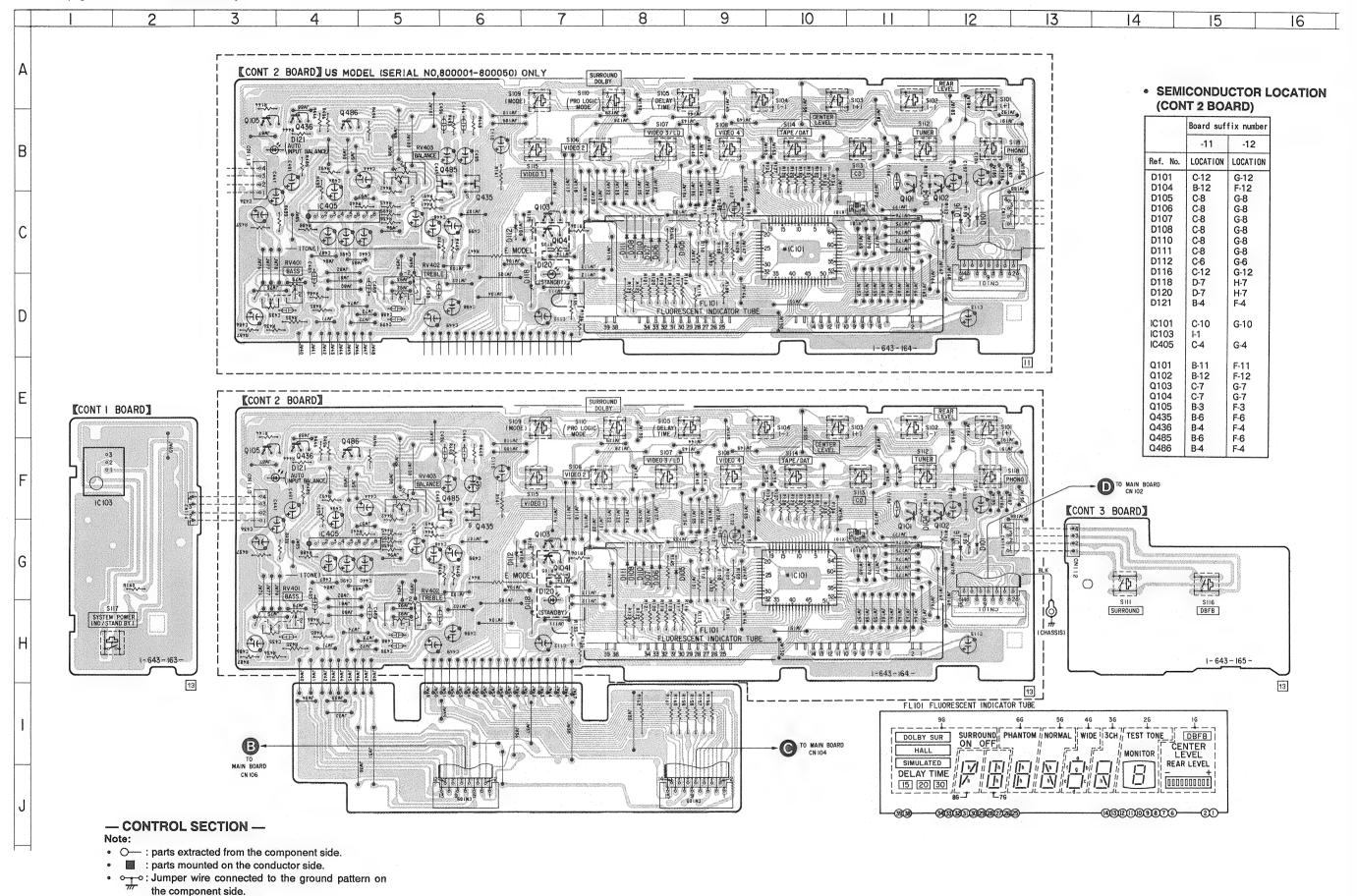
- Refer to page 21 for IC BLOCK DIAGRAM
- Refer to page 16 for Semiconductor Lead Layouts



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### 3-8. PRINTED WIRING BOARD — CONTROL SECTION —

- Refer to page 21 for IC BLOCK DIAGRAM
- Refer to page 16 for Semiconductor Lead Layouts



• \*\*\*\*: Pattern on the side which is seen.

### SECTION 4 EXPLODED VIEWS

### NOTE:

- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts Example:

KNOB, BALANCE (WHITE) ... (RED)

Parts color

Cabinet's color

 Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

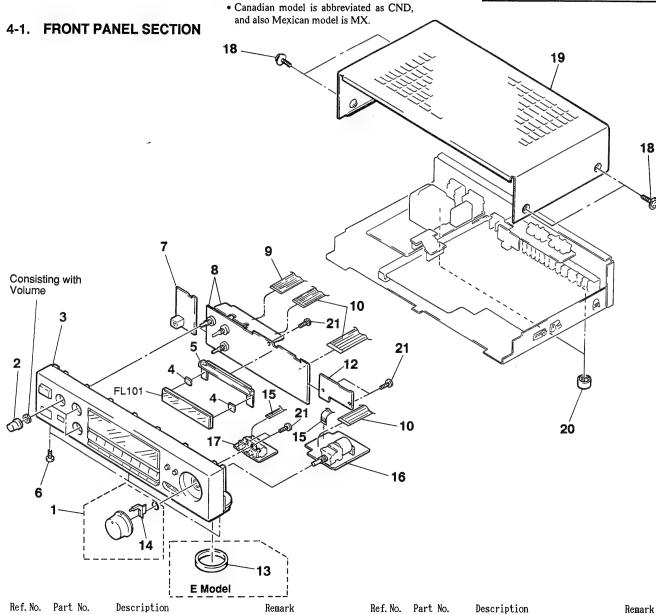
critical for safety.
Replace only with part number specified.
Les composants identifiés par une

The components identified by mark

⚠ or dotted line with mark ⚠ are

Les composants identifiés par une marque  $\triangle$  sont critiques pour la sécurité.

Ne les remplacer que par une piéce portant le numéro spécifié.

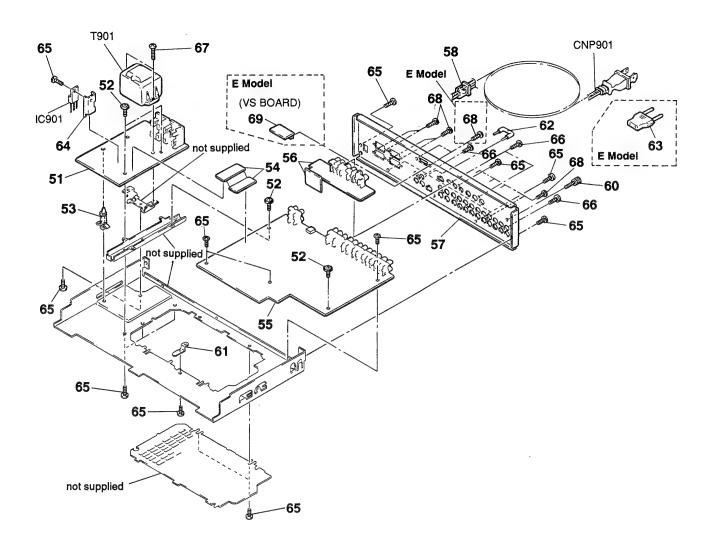


Ref. No.	Part No.	Description	Remar
1	X-4942-296-1	KNOB ASSY	
2	4-943-420-11	KNOB (DIA. 19)	
3	X-4942-294-1	PANEL ASSY, FRONT (US, Canadi	an)
3	X-4942-295-1	PANEL ASSY, FRONT (E)	·
* 4	4-921-941-21	CUSHION (FL)	
* 5	4-934-443-01	HOLDER (FL TUBE)	
6	7-682-548-09	SCREW +BVTT 3X8 (S)	
* 7	1-643-163-11	PC BOARD, CONT 1	
* 8	A-4347-305-A	CONT 2 BOARD, COMPLETE (US. C.	anadian)
* 8	A-4347-310-A	CONT 2 BOARD, COMPLETE (E)	,
9		WIRE, FLAT TYPE (13 CORE)	
		- (	

1-690-095-11 WIRE, FLAT TYPE (15 CORE)

ne1. no.	rait NO.	Description	пеша
* 12	1-643-165-11	PC BOARD, CONT 3	
* 13	4-929-030-11	RING (DIA. 58A), ORNAMENTAL (E)	
14		PLATE (VOL), LIGHT GUIDE	
15	1-575-730-11	WIRE, FLAT TYPE (5 CORE)	
* 16	1-643-166-11	PC BOARD, M-VOL	
* 17	1-643-169-11	PC BOARD, VIDEO 4	
18	3-704-366-01	SCREW (CASE) (M3X8)	
* 19	4-937-817-11	CASE	
20	4-933-601-01	FOOT	
21	4-928-635-01	SCREW, +BV (2.6X8) TAPPING	
FL101	1-519-727-11	INDICATOR TUBE, FLUORESCENT	

### 4-2. BACK PANEL SECTION



Ref. No.	Part No.	Description	Remark
* 51	A-4347-303-A	PS BOARD, COMPLETE (US, Canadian	n)
* 51		PS BOARD, COMPLETE (E)	
52	4-886-821-11	SCREW, S TIGHT, +PTTWH 3X6	
* 53	3-346-265-11	HOLDER, PC BOARD	
* 54	1-643-170-11	PC BOARD, CN	
* 55	A-4347-299-A	MAIN BOARD, COMPLETE	
* 56	A-4347-300-A	VIDEO BOARD, COMPLETE	
* 57	4-945-755-41	PANEL, BACK (US, Canadian)	
* 57		PANEL, BACK (E)	
* 58	3-703-244-00	BUSHING (2104), CORD (US, Canadi	ian)
* 58		BUSHING (S) (4516), CORD (E)	Luii)
60		SCREW, FEEDER FIXED	
* 61	3-332-563-01	BRACKET (P)	

Ref. No.	Part No.	Description	Remark
62	1-535-530-11	PLUG, JUMPER	
<b>11</b> 63	1-569-007-11	ADAPTER, CONVERSION 2P (E)	
* 64	3-309-144-21	HEAT SINK	
65	7-682-548-09	SCREW +BVTT 3X8 (S)	
66	7-621-849-00	SCREW (BV/RING)	
67	7-682-550-04	SCREW +BVTT 3X12 (S)	
68	7-685-646-79	SCREW +BTP 3X8 TYPE2 N-S	
* 69	1-643-171-11	PC BOARD, VS (E)	
∕nCNP901	1-574-902-11	CORD, POWER (E)	
		CORD, POWER (US, Canadian)	
IC901	8-759-604-39	IC M5F78M12	
<b>1</b> T901	1-450-845-11	TRANSFORMER, POWER (US, Canadia	an)
<b>1</b> T901	1-450-846-11	TRANSFORMER, POWER (E)	

### **SECTION 5 ELECTRICAL PARTS LIST**

CONT 1

### NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS All resistors are in ohms. METAL: Metal-film resistor. METAL OXIDE: Metal oxide-film resistor. F:nonflammable
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS

In each case,  $u:\mu$ , for example: uA ..: μA.. uPA..: μPA..  $uPB...: \mu PB... uPC...: \mu PC... uPD...: \mu PD...$ 

- CAPACITORS uF: μF
- COILS uH:  $\mu$ H

When indicating parts by reference number, please include the board.

The components identified by mark A or dotted line with mark. A are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.

Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description			Remai
*	1-643-170-11	CN ROARD				FLFCT	- 47uF	20%	16V
	1 010 110 11	******			1-124-910-11		47uF	20%	50V
				C113	1-124-910-11		47uF	20%	50V
		< CONNECTOR >		C122	1-126-301-11		1uF	20%	50V
		,		C435	1-136-159-00		0. 033uF	5%	50V
* CN903	1-560-285-11	CONNECTOR, (PIN) 12P			1 100 100 00		0.000	0.0	
		CONNECTOR. (PIN) 12P		C436	1-124-250-00	ELECT	0. 15uF	20%	50V
		, , , , , , , ,		C437	1-126-163-11		4. 7uF	20%	50V
******	*****	********	*****	C438	1-106-363-00		6800PF	5%	200V
				C439	1-136-159-00		0. 033uF	5%	50V
*	1-643-163-11	CONT 1 BOARD		C440	1-126-163-11		4. 7uF	20%	50V
		*****					20 1 44		
				C441	1-126-177-11	ELECT	100uF	20%	10V
		< CONNECTOR >		C444	1-126-163-11	ELECT	4. 7uF	20%	50V
				C445	1-126-301-11	ELECT	1uF	20%	50V
▶ CN114	1-565-295-11	PLUG, CONNECTOR 4P		C446	1-130-491-00	MYLAR	0. 047uF	5%	50V
		•		C448	1-124-257-00	ELECT	2. 2uF	20%	50V
		< IC >							
				C449	1-126-163-11	ELECT	4. 7uF	20%	50V
IC103	8-749-920-83	IC GP1U52XB		C485	1-136-159-00	FILM	0.033uF	5%	50V
				C486	1-124-250-00	ELECT	0. 15uF	20%	50V
		< RESISTOR >		C487	1-126-163-11	ELECT	4. 7uF	20%	50V
				C488	1-106-363-00	MYLAR	6800PF	5%	200V
R140	1-249-429-11	CARBON 10K 5%	1/4W						
				C489	1-136-159-00	FILM	0. 033uF	5%	50V
		< SWITCH >		C490	1-126-163-11	ELECT	4. 7uF	20%	50V
				C491	1-126-177-11	ELECT	100uF	20%	10V
S117	1-554-303-21	SWITCH, TACTILE (SYSTEM PO	OWER)	C494	1-126-163-11	ELECT	4. 7uF	20%	50V
				C495	1-126-301-11	ELECT	1uF	20%	50V
*****	******	*********	******						
				C496	1-130-491-00	MYLAR	0. 047uF	5%	50V
ŧ	A-4347-305-A	CONT 2 BOARD, COMPLETE (US	S, Canadian)	C498	1-126-163-11	ELECT	4. 7uF	20%	50V
		CONT 2 BOARD, COMPLETE (E)		C499	1-124-250-00	ELECT	0. 15uF	20%	50V
		********	*****						
						< CONNECTOR	>		
	4-921-941-21	CUSHION (FL)							
	4-934-443-01	HOLDER (FL TUBE)		CN101	1-691-648-11	SOCKET, CONN	ECTOR 15P		
				* CN103	1-568-858-11	SOCKET, CONN	ECTOR 15P		
		< CAPACITOR >		* CN105	1-568-856-11	SOCKET, CONN	ECTOR 13P		
				* CN111	1-565-480-11	CONNECTOR, B	OARD TO BOA	ARD 4P	
C101	1-124-465-00	ELECT 0. 47uF 20	0% 50V	* CN113	1-565-480-11	CONNECTOR, B	OARD TO BOA	ARD 4P	
C102	1-161-494-00	CERAMIC 0. 022uF	25V						
C104	1-126-177-11	ELECT 100uF 20	0% 10V						
C105	1-164-097-11	CERAMIC 0. 022uF	50V						
C106	1-130-487-00	MYLAR 0. 022uF 59	6 50V	1					

### CONT 2

Ref. No.	Part No.	Descript	ion			R	emark	I	Ref. No.	Part N	0.	Description			Remark
		< DIODE >	>					1	R112	1-249-	425-11	CARBON	4. 7K	5%	1/4W
									R113			CARBON	4. 7K		1/4W
D101	8-719-987-63	DIODE 1	1N4148M	ĺ					R114			CARBON	4. 7K		1/4W
D104	8-719-987-63	DIODE 1	1N4148M	ĺ					R115	1-249-	437-11	CARBON	47K	5%	1/4W
D105	8-719-987-63	DIODE 1	1N4148M	i					R116	1-249-	437-11	CARBON	47K	5%	1/4W
D106	8-719-987-63	DIODE 1	1N4148M	i											
D107	8-719-987-63	DIODE 1	1N4148M	i					R117	1-249-	437-11	CARBON	47K	5%	1/4W
									R118	1-249-	437-11	CARBON	47K	5%	1/4W
D108	8-719-987-63	DIODE 1	1N4148M	i					R119	1-249-	437-11	CARBON	47K	5%	1/4W
D110	8-719-987-63	DIODE 1	1N4148M	İ					R120	1-249-	437-11	CARBON	47K	5%	1/4W
D111	8-719-987-63	DIODE 1	1N4148M	İ					R121	1-249-	437-11	CARBON	47K	5%	1/4W
D112	8-719-914-11	DIODE H	HZ4ALL												
D116	8-719-987-63	DIODE 1	1N4148M	i					R122	1-249-	437-11	CARBON	47K	5%	1/4W
									R123	1-249-	437-11	CARBON	47K	5%	1/4W
D118	8-719-014-48		UZP-4. 7						R125	1-249-	425-11	CARBON	4. 7K	5%	1/4W
D120	8-719-301-37		SEL2210		(E)				R126	1-249-	437-11	CARBON	47K	5%	1/4W
D121	8-719-301-49	LED S	SEL2810	A					R127	1-249-	437-11	CARBON	47K	5%	1/4W
		< INDICAT	for Tub	E >					R128			CARBON	47K	5%	1/4W
									R129			CARBON	47K	5%	1/4W
FL101	1-519-727-11	INDICATOR	₹ TUBE,	FLUOF	RESCEN	T			R130			CARBON	47K	5%	1/4W
		( *a )							R131			CARBON	47K	5%	1/4W
		< IC >							R132	1-249-4	437-11	CARBON	47K	5%	1/4W
TC101	8-759-062-41	ICDD5	7520605	700 0	ממו				D1 00	1 040	407 11	GADDON	4777	rω	4 /400
	8-759-634-50			-122-3	IDE				R133			CARBON	47K	5% =~	1/4W
10400	0-709-004-00	IC M521	LOAL						R134			CARBON	47K	5%	1/4W
		< TRANSIS	TOD \						R135			CARBON	100	5% =~	1/4W
		/ INAMOIS	310h /					-	R136			CARBON	100	5%	1/4W
Q101	8-729-900-36	TDANGIGTO	אדת סו	C124ES				į	R138	1-249-4	437-11	CARBON	47K	5%	1/4W
Q101 Q102	8-729-900-63			A124ES				ļ	R139	1-249-4	127_11	CADDON	47K	5%	1/4W
Q102 Q103	8-729-620-05			C2603-				ļ	R141	1-249-4			100	5%	1/4W
Q103	8-729-900-63			A124ES					R144	1-249-4			330	5%	1/4W
Q105	8-729-900-36			C124ES					R145	1-249-4			1K	5%	1/4W
6700	0 720 300 00	1101101010	n DI	712760	'				R156	1-249-4			47K	5%	1/4W
Q435	8-729-224-61	TRANSISTO	)R 2SI	K246-Y	,				11100	1 240	107 11	OMIDON	4111	0.70	1/ 111
Q436	8-729-620-05			C2603-					R157	1-249-4	137-11	CARRON	47K	5%	1/4W
Q485	8-729-224-61			K246-Y					R158	1-249-4			47K	5%	1/4W
Q486	8-729-620-05			C2603-					R159	1-249-4			47K	5%	1/4W
									R160	1-249-4			47K	5%	1/4W
		< RESISTO	)R >						R161	1-249-4			47K	5%	1/4W
										1 210 .		oinibon	****	070	2, 2,1
R101	1-247-903-00	CARBON		1M	5%	1/4W			R162	1-249-4	29-11	CARBON	10K	5%	1/4W
R102	1-249-429-11	CARBON		10K	5%	1/4W			R435	1-249-4			1K	5%	1/4W
R103	1-247-895-00			470K	5%	1/4W			R436	1-249-4			10K	5%	1/4W
R105	1-249-409-11			220	5%	1/4W	(E)		R437	1-249-4			2. 2K		1/4W
R106	1-249-417-11			1K	5%	1/4W	(-)		R438	1-249-4			100K		1/4W
R107	1-249-411-11	CARBON		330	5%	1/4W			R439	1-249-4	27-11	CARBON	6.8K	5%	1/4W
R108	1-249-411-11	CARBON		330	5%	1/4W			R440	1-249-4	38-11	CARBON	56K	5%	1/4W
R109	1-249-411-11	CARBON		330	5%	1/4W			R441	1-249-4	41-11	CARBON	100K	5%	1/4W
R110	1-249-411-11			330	5%	1/4W			R442	1-249-4	17-11	CARBON	1K	5%	1/4W
R111	1-249-425-11	CARBON		4. 7K	5%	1/4W			R443	1-249-4	18-11	CARBON	1. 2K	5%	1/4W
					•				D44*	4 0:= -		a i ppov	4=0	<b>5</b> 0:	4 /400
										1-247-8			150K		1/4W
										1-249-4			390	5%	1/4W
										1-249-4			6. 8K		1/4W
		÷							R447	1-249-4	Z1-11	CAKBUN	2. 2K	5%	1/4W
								1							

### CONT 2 CONT 3 M-VOL MAIN

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description	on		Remark
R448	1-247-903-00	CARBON	1M	5%	1/4W			< SWITCH :	<del></del>		
R449 R485 R486	1-249-437-11 1-249-417-11 1-249-429-11	CARBON	1K	5% 5% 5%	1/4\\ 1/4\\ 1/4\\	S111 S116	1-554-303-21 1-554-303-21			UND)	
R487	1-249-429-11		2. 2K		1/4W	******	*****	*******	******	*****	*****
R488	1-249-441-11		100K		1/4W						
						*	1-643-166-11				
R489	1-249-427-11		6. 8K		1/4W			*****	**		
R490 R491	1-249-438-11 1-249-441-11		56K 100K	5% ==v	1/4W 1/4W			< CAPACITO	י מו		
R492	1-249-417-11			5%	1/4W			\ UAFAUII	n /		
R493	1-249-418-11		1. 2K		1/4W	C107	1-124-273-00	ELECT	3. 3uF	20%	50V
	1 210 110 11	0.11.120.11	1. 211	070	1, 1,,	C108	1-130-483-00		0. 01uF	5%	50V
R494	1-247-883-00	CARBON	150K	5%	1/4W	C109	1-130-483-00	MYLAR	0.01uF	5%	50V .
R495	1-249-412-11	CARBON	390	5%	1/4W						
R496	1-249-427-11	CARBON	6. 8K	5%	1/4W			< CONNECTO	)R >		
		< VARIABLE RESIS	STOR >				1-568-824-11 1-568-834-11				
RV401	1-241-858-11	RES, VAR, CARBON	100K/	100K	(BASS)	- 01001	1 000 001 11	boomer, or	MINDOTOR 101		
RV402	1-241-858-11	RES, VAR, CARBON	100K/	100K	(TREBLE)			< DIODE >			
RV403	1-241-022-11	RES, VAR, CARBON	150K/	150K	(BALANCE)						
		< SWITCH >				D130	8-719-933-41		S6C3L		
7404	4 5554 600 04		( /== :					< IC >			
S101		SWITCH, TACTILE				7.010.0	0 750 000 00	TO 10400	10		
S102 S103		SWITCH, TACTILE SWITCH, TACTILE				16102	8-759-820-62	IC LB163	19		
S103		SWITCH, TACTILE						< TRANSIST	יחם /		
S105		SWITCH, TACTILE	( (OLI	ILLIE L	L*LL()			/ 11MM10101	oit >		
5200	1 001 000 21		Y TIME	(SURR	OUND DOLBY))	Q100	8-729-140-98	TRANSISTOR	2SD773-34		
S106	1-554-303-21	SWITCH, TACTILE	(VIDEO	2)							
S107		SWITCH, TACTILE			)			< RESISTOR	! >		
S108		SWITCH, TACTILE									
S109		SWITCH, TACTILE	(MODE (	SURRO	UND DOLBY))	R146	1-249-425-11		4. 7K		./4W
S110	1-554-303-21	SWITCH, TACTILE	C MODE	/CUDD	OUND DOLBY))	R147	1-249-425-11		4.7K		./4W
S112	1-55/-303-91	SWITCH, TACTILE			OUND DOLDI))	R154 R155	1-249-414-11 1-249-421-11		560 S 2. 2K		./4W ./4W
S112		SWITCH, TACTILE		,		III	1 243 421 11	CAMDON	Z. ZN	J <i>N</i> ) 1	./411
S114		SWITCH, TACTILE		DAT)				< VARIABLE	RESISTOR >		
S115	1-554-303-21	SWITCH, TACTILE	(VIDEO	1)							
S118	1-554-303-21	SWITCH, TACTILE	(PHONO	)		RV301	1-241-816-11	RES, VAR,	CARBON 100KX4	4 (VOLU	ME)
		< VIBRATOR >				******	******	******	******	*****	*****
X101	1-577-101-11	VIBRATOR, CERAMI	С			*	A-4347-299-A		, COMPLETE		
******	******	*******	*****	****	******						
	1 040 405 44	dom o borbe				*	4-942-204-01	BOARD PLAT	E, GROUND		
*	1-643-165-11	**********						< CAPACITO	R >		
		< connector >				C001	1-164-062-11		47PF	5%	50V
* CN119	1-565-905-11	PLUG, CONNECTOR	ΛD				1-164-062-11		47PF	5% 5%	50V
· ONIIZ	1 101-739-11	ILUU, CUMMECIUK	*±F			C202 C203	1-164-072-11 1-124-907-11		120PF 10uF	5% 20%	50V 50V
						C203	1-162-284-31		150PF	10%	50V
						2001	_ 102 201 31		20011	2010	50.

### MAIN

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
C205	1-124-925-11	ELECT	2. 2uF	20%	100V	C340	1-136-165-00	FILM	0. 1uF	5%	50V
C206	1-130-480-00	MYLAR	0.0056uF	5%	50V						
C207	1-106-347-00	MYLAR	1500PF	5%	200V	C341	1-164-083-11	CERAMIC	680PF	10%	50V
C208	1-124-902-00	ELECT	0. 47uF	20%	50V	C342	1-130-483-00		0. 01uF	5%	50V
C209	1-161-494-00		0. 022uF		25V	C343	1-124-907-11		10uF	20%	50V
			0.02241		201	C344	1-124-907-11		10uF	20%	50V
C210	1-124-477-11	FLECT	47uF	20%	25V	C345	1-124-907-11		10uF	20%	50V
C231	1-162-294-31		0.001uF	10%	50V	0040	1 124 507 11	LDLOI	1001	20%	301
C252	1-164-072-11		120PF	5%	50V	C346	1-124-907-11	FIFCT	10uF	20%	50V
C253	1-124-907-11		10uF	20%	50V	C347	1-136-173-00		0. 47uF	5%	50V
C254	1-162-284-31		150PF	10%	50V	C348	1-124-252-00		0. 33uF	20%	50V
0204	1 102 204 31	OLIVANIO	13011	10%	304	C349	1-124-232-00			20% 5%	50V
C255	1-124-925-11	FIFCT	2 2	200	1007				0. 1uF		
			2. 2uF	20%	100V	C350	1-136-165-00	LILM	0. 1uF	5%	50V
C256	1-130-480-00		0.0056uF	5%	50V	0054	4 404 007 44	D. Dam	40. 5		
C257	1-106-347-00		1500PF	5%	200V	C351	1-124-907-11		10uF	20%	50V
C258	1-124-902-00		0. 47uF	20%	50V	C352	1-164-062-11		47PF	5%	50V
C259	1-161-494-00	CERAMIC	0. 022uF		25V	C353	1-124-907-11		10uF	20%	50V
						C354	1-164-083-11		680PF	10%	50V
C260	1-124-477-11		47uF	20%	25V	C355	1-124-925-11	ELECT	2. 2uF	20%	100V
C301	1-124-907-11		10uF	20%	50V						
C302	1-164-062-11		47PF	5%	50V	C356	1-124-925-11	ELECT	2. 2uF	20%	100V
C303	1-124-907-11	ELECT	10uF	20%	50V	C357	1-136-167-00	FILM	0. 15uF	5%	50V
C308	1-130-480-00	MYLAR	0.0056uF	5%	50V	C358	1-123-382-00	ELECT	3. 3uF	20%	100V
						C359	1-136-167-00	FILM	0. 15uF	5%	50V
C309	1-106-363-00	MYLAR	6800PF	5%	200V	C360	1-126-176-11	ELECT	220uF	20%	10V
C310	1-164-082-11	CERAMIC	560PF	10%	50V						
C311	1-124-907-11	ELECT	10uF	20%	50V	C361	1-124-910-11	ELECT	47uF	20%	50V
C312	1-164-083-11	CERAMIC	680PF	10%	50V	C362	1-124-907-11		10uF	20%	50V
C313	1-136-167-00	FILM	0. 15uF	5%	50V	C363	1-124-907-11		10uF	20%	50V
						C364	1-124-252-00		0. 33uF	20%	50V
C314	1-164-075-11	CERAMIC	150PF	10%	50V	C365	1-136-165-00		0. 1uF	5%	50V
C315	1-130-487-00		0. 022uF	5%	50V	0000	1 100 100 00	LIDM	0. 141	0.0	001
C316	1-162-294-31		0. 001uF	10%	50V	C366	1-136-165-00	FILM	0. 1uF	5%	50V
C317	1-124-927-11		4. 7uF	20%	100V	C367	1-164-083-11		680PF	10%	50V
C318	1-130-485-00		0. 015uF	5%	50V	C368	1-124-925-11		2. 2uF	20%	100V
0010	1 130 403 00	MILAIL	o. orour	J <i>1</i> 0	304	C369	1-124-925-11		2. 2uF	20%	100V 100V
C319	1-124-907-11	FIFCT	10uF	20%	50V	C370	1-124-323-11				
C320	1-124-907-11		10uF	20%	50V 50V	6370	1-130-107-00	r 1LM	0. 15uF	5%	50V
C321	1-124-907-11		10uF	20%	50V	C371	1-123-382-00	EI ECT	2 2	200	1000
C322	1-130-489-00		0. 033uF	5%	50V	C371	1-136-167-00		3. 3uF 0. 15uF	20% 5%	100V 50V
C323	1-106-359-00		4700PF	5%	200V	C374	1-124-927-11		0. 15ur 4. 7uF	20%	100V
0020	1 100 333 00	MILLAN	470011	3/0	2004						
C324	1-130-477-00	MVI AD	0.0033uF	5%	50V	C378 C383	1-136-169-00 1-136-169-00		0. 22uF 0. 22uF	5% =~	50V
C325	1-136-163-00		0. 068uF	5%	50V	0303	1-130-103-00	LILM	U. 22ur	5%	50V
C326	1-136-169-00		0. 22uF		į.	COOF	1 120 400 00	MD/I AD	0.0000	FOV	FOTZ
				5%	50V	C385	1-130-489-00		0. 033uF	5%	50V
C329	1-124-472-11		470uF	20%	10V	C398	1-124-907-11		10uF	20%	50V
C330	1-124-927-11	ELEUI	4. 7uF	20%	100V	C399	1-124-907-11		10uF	20%	50V
0004	4 400 004 04					C400	1-124-907-11		10uF	20%	50V
C331	1-162-294-31		0.001uF	10%	50V	C402	1-164-058-11	CERAMIC	33PF	5%	50V
C332	1-130-487-00		0. 022uF	5%	50V						
C333	1-164-075-11		150PF	10%	50V	C403	1-164-070-11		100PF	5%	50V
C334	1-126-176-11		220uF	20%	10V	C408	1-124-907-11		10uF	20%	50V
C335	1-126-176-11	ELECT	220uF	20%	10V	C409	1-124-907-11		10uF	20%	50V
						C410	1-124-927-11	ELECT	4. 7uF	20%	100V
C336	1-124-120-11		220uF	20%	25V	C411	1-124-927-11	ELECT	4. 7uF	20%	100V
	1-136-165-00	FILM	0. 1uF	5%	50V						
C338	1-124-443-00	ELECT	100uF	20%	10V	C412	1-124-927-11	ELECT	4. 7uF	20%	100V
C339	1-124-907-11	ELECT	10uF	20%	50V	C413	1-124-927-11	ELECT	4. 7uF	20%	100V

### MAIN

Re	ef. No.	Part No.	Description			Remark	Ref. No.	Part No.	Descri	iption			Remark
	C414	1-124-477-11	ELECT	47uF	20%	25V	10309	8-759-801-01	IC I	LC4966			
	C416	1-124-250-00		0. 15uF	20%	50V		8-759-634-50		45218AL			
	C450	1-124-907-11	ELECT	10uF	20%	50V		8-759-634-50		15218AL			
								8-759-634-51		M5218AP			
	C452	1-164-058-11	CERAMIC	33PF	5%	50V		8-759-820-11		C7535			
	C453	1-164-070-11	CERAMIC	100PF	5%	50V							
	C458	1-124-907-11	ELECT	10uF	20%	50V			< COII	. >			
	C459	1-124-907-11	ELECT	10uF	20%	50V							
	C460	1-124-927-11	ELECT	4. 7uF	20%	100V	L301	1-410-521-11	INDUCT	FOR	100ul		
	C461	1-124-927-11		4. 7uF	20%	100V			< JACH	< >			
	C462	1-124-927-11		4. 7uF	20%	100V							
	C463	1-124-927-11	ELECT	4. 7uF	20%	100V	PJ200	1-565-320-61	JACK,	PIN 6P	(PHONO/T	UNER/CI	))
	C464	1-124-250-00		0. 15uF	20%	50V	PJ201	1-565-320-61	JACK,	PIN 6P	(TAPE/DA	T/VIDE	3/LD)
	C465	1-124-250-00	ELECT	0. 15uF	20%	50V	PJ202	1-565-258-11	JACK,	PIN 4P	(VIDEO 2	)	
							PJ203	1-565-258-11	JACK,	PIN 4P	(VIDEO 1	)	
		1-164-097-11		0. 022uF		50V	PJ204	1-563-562-11	JACK,	PIN 4P	(ADAPTOR	)	
		1-164-097-11		0. 022uF		50V							
		1-164-093-11			10%	25V	PJ401	1-565-258-11	JACK,	PIN 4P	(OUTPUT)		
		1-164-093-11			10%	25V							
	C1005	1-164-097-11	CERAMIC	0. 022uF		50V			< TRAN	SISTOR	>		
	C1006	1-124-903-11	ELECT	1uF	20%	50V	Q106	8-729-900-36	TRANSI	STOR	DTC124ES		
		1-124-903-11		1uF	20%	50V	Q107	8-729-900-36			DTC124ES		
		1-162-286-31		220PF	10%	50V	Q108	8-729-900-36			DTC124ES		
		1-162-286-31		220PF	10%	50V	Q301	8-729-900-36			DTC124ES		
					20.0		0302	8-729-900-63			DTA124ES		
			< CONNECTOR >				4002	0 120 000 00	Hemor	DIOR	DIMILATED		
							Q303	8-729-900-36	TRANSI	STOR	DTC124ES		
*	CN102	1-568-834-11	SOCKET, CONNEC	TOR 15P			Q304	8-729-141-30			2SC3623A	-LK	
*	CN104	1-568-834-11	SOCKET, CONNEC	TOR 15P			Q305	8-729-209-15	TRANSI	STOR	2SD2012		
*	CN106	1-568-832-11	SOCKET, CONNEC	TOR 13P			Q331	8-729-900-36	TRANSI	STOR	DTC124ES		
*	CN108	1-568-824-11	SOCKET, CONNEC	TOR 5P			Q332	8-729-900-36	TRANSI	STOR	DTC124ES		
	CN110	1-566-211-11	PIN, CONNECTOR	4P (POWER	AMP CO	ONTROL OUT)							
							Q333	8-729-900-63	TRANSI	STOR	DTA124ES		
			SOCKET, CONNEC				Q403	8-729-141-26	TRANSI	STOR	2SC3622A	-LK	
			SOCKET, CONNEC				Q404	8-729-141-26	TRANSI	STOR	2SC3622A	-LK	
			CONNECTOR (SOC				Q406	8-729-141-26			2SC3622A	-LK	
	CN902	1-573-147-11	HOUSING, CONNE	CTOR 12P			Q408	8-729-900-63	TRANSI	STOR	DTA124ES		
			< DIODE >				Q409	8-729-900-63	TRANSI	STOR	DTA124ES		
							Q410	8-729-900-63			DTA124ES		
	D399	8-719-987-63	DIODE 1N4148	M			Q453	8-729-141-26			2SC3622A	-LK	
			< IC >						< RESI	STOR >			
		8-759-805-14					R142	1-249-405-11	CARBON		100	5%	1/4W
		8-759-634-51						1-249-405-11			100	5%	1/4W
		8-759-801-01						1-249-405-11			100	5%	1/4W
		8-759-801-01						1-249-411-11			330		1/4W
	IC301	8-759-634-50	IC M5218AL				R203	1-249-437-11	CARBON		47K	5%	1/4W
	IC302	8-759-801-01	IC LC4966				R204	1-249-416-11	CARRON		820	5%	1/4W
		8-759-823-63						1-247-897-11			560K		1/4W
		8-759-821-13		5				1-249-437-11			47K		1/4W
		8-759-047-15		-				1-249-441-11			100K		1/4W
		8-759-634-50						1-249-409-11			220		1/4W
											-40	2.0	-, *"

### MAIN

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
R209	1-249-417-11	CARBON	1K	5%	1/4W	R320	 1-249-429-11	CARBON	10K	5%	1/4W
R210	1-249-426-11	CARBON	5. 6K	5%	1/4W						
R211	1-249-417-11	CARBON	1K	5%	1/4W	R321	1-249-429-11	CARBON	10K	5%	1/4W
R212	1-249-417-11	CARBON	1K	5%	1/4W	R325	1-249-433-11	CARBON	22K	5%	1/4W
R213	1-249-426-11	CARBON	5. 6K	5%	1/4W	R326	1-249-433-11		22K	5%	1/4W
					•	R333	1-249-433-11		22K	5%	1/4W
R214	1-249-417-11	CARBON	1K	5%	1/4W	R342	1-249-427-11		6. 8K		1/4W
R215	1-249-417-11		1K	5%	1/4W				*****		-,
R216	1-249-417-11		1K	5%	1/4W	R343	1-249-427-11	CARBON	6. 8K	5%	1/4W
R217	1-249-417-11		1K	5%	1/4W	R345	1-249-433-11		22K	5%	1/4W
R218	1-249-405-11		100	5%	1/4W	R349	1-249-423-11		3. 3K		1/4W
11210	1 243 400 11	UMBON	100	0.00	1/ 411	R350	1-247-887-00		220K		1/4W
R219	1-249-405-11	CAPRON	100	5%	1/4W	R351	1-247-887-00		220K		1/4W
R220	1-249-433-11		22K	5%		njji	1-247-007-00	CARDON	ZZUK	3/0	1/411
					1/4W	מחרם	1 047 007 00	CADRON	00017	τω	1 /450
R221	1-249-433-11		22K	5%	1/4W	R352	1-247-887-00		220K		1/4W
R224	1-249-429-11		10K	5%	1/4W	R353	1-249-405-11		100	5%	1/4W
R252	1-249-411-11	CARBON	330	5%	1/4W	R355	1-249-429-11		10K	5%	1/4W
						R356	1-249-429-11		10K	5%	1/4W
R253	1-249-437-11		47K	5%	1/4W	R357	1-249-433-11	CARBON	22K	5%	1/4W
R254	1-249-416-11	CARBON	820	5%	1/4W						
R255	1-247-897-11	CARBON	560K	5%	1/4W	R358	1-247-887-00	CARBON	220K	5%	1/4W
R256	1-249-437-11	CARBON	47K	5%	1/4W	R359	1-247-887-00	CARBON	220K	5%	1/4W
R257	1-249-441-11	CARBON	100K	5%	1/4W	R360	1-247-887-00	CARBON	220K	5%	1/4W
						R361	1-247-887-00	CARBON	220K	5%	1/4W
R258	1-249-409-11	CARBON	220	5%	1/4W	R362	1-249-433-11		22K	5%	1/4W
R259	1-249-417-11	CARBON	1K	5%	1/4W						
R260	1-249-426-11		5. 6K		1/4W	R363	1-249-421-11	CARBON	2. 2K	5%	1/4W
R261	1-249-417-11		1K	5%	1/4W	R364	1-247-852-11		7. 5K		1/4W
R262	1-249-417-11		1K	5%	1/4W	R365	1-249-431-11		15K	5%	1/4W
11202	1 210 117 11	Olimbon.		0.0	1/ 111	R366	1-249-437-11		47K	5%	1/4W
R263	1-249-426-11	CARRON	5. 6K	59	1/4W	R367	1-249-429-11		10K	5%	1/4W
R264	1-249-417-11		1K	5%	1/4W	11307	1 243 423 11	OMIDON	101/	J /0	1/411
R265	1-249-417-11		1K	5%	1/4W	R368	1-249-421-11	CADDON	2. 2K	. Ee	1/4W
R266											
	1-249-417-11		1K	5% 5%	1/4W	R369	1-249-437-11		47K	5%	1/4W
R267	1-249-417-11	CARBON	1K	5%	1/4W	R370	1-249-425-11		4. 7K		1/4W
naca	1 040 405 11	CADDON	100	EW	4 /AW	R371	1-249-430-11		12K	5%	1/4W
R268	1-249-405-11		100	5%	1/4W	R373	1-247-887-00	CARBUN	220K	5%	1/4W
R269	1-249-405-11		100	5%	1/4W	D074	1 047 007 00	CARRON	MOON	ΕOV	1 /450
R270	1-249-433-11		22K	5% 5%	1/4W	R374	1-247-887-00		220K		1/4W
R271	1-249-433-11		22K	5%	1/4W	R376	1-247-887-00		220K		1/4W
R300	1-247-887-00	CARBUN	220K	3%	1/4₩	R377	1-247-887-00		220K		1/4W
2004						R378			10K		1/4W
R301	1-247-887-00		220K		1/4W	R380	1-249-421-11	CARBON	2. 2K	5%	1/4W
R302	1-247-887-00		220K		1/4W	_					
R303	1-249-405-11		100	5%	1/4W	R381	1-247-852-11		7. 5K		1/4W
R309	1-249-428-11		8. 2K		1/4W	R382	1-249-431-11		15K	5%	1/4W
R310	1-249-428-11	CARBON	8. 2K	5%	1/4W	R385	1-249-413-11		470	5%	1/4W
						R398	1-249-429-11	CARBON	10K	5%	1/4W
R311	1-249-431-11	CARBON	15K	5%	1/4W	R399	1-249-417-11	CARBON	1K	5%	1/4W
R312	1-249-428-11	CARBON	8. 2K	5%	1/4W						
R313	1-249-436-11	CARBON	39K	5%	1/4W	R401	1-247-887-00	CARBON	220K	5%	1/4W
R314	1-249-423-11	CARBON	3. 3K	5%	1/4W	R402	1-249-429-11		10K	5%	1/4W
R315	1-249-437-11		47K	5%	1/4W	R410	1-249-421-11		2. 2K		1/4W
<del>-</del>		-				R414	1-249-429-11		10K	5%	1/4W
R316	1-247-903-00	CARBON	1M	5%	1/4W	R415	1-249-423-11		3. 3K		1/4W
R317	1-249-429-11		10K	5%	1/4W	11110	1 210 120 11	· ALLEVII	o. on	0.0	1/ 111
R318	1-247-887-00		220K		1/4W	R416	1-249-436-11	CARRON	39K	5%	1/4W
R319	1-249-429-11		220K 10K	5%	1/4\\\\	R410	1-249-430-11		820	5%	1/4W
กงเร	1-742-472-11	UMRDUN	IUV	J/6	1/411	R41/	1-243-410-11	VARDUN	020	J/6	T\44

### MAIN PS

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Descripti	on		Remark
R418	1-249-417-11	CARBON	1K	5%	1/4W	C908	1-124-907-11	ELECT	10uF	20%	50V
R420	1-249-417-11		1K	5%	1/4W	C909	1-124-907-11		10uF	20%	50V
R421	1-249-417-11		1K	5%	1/4W	C910	1-124-907-11		10uF	20%	50V
R423	1-249-417-11	CARBON	1K	5%	1/4W	C911	1-124-477-11	ELECT	47uF	20%	25V
R424	1-249-417-11	CARBON	1K	5%	1/4W	C912	1-130-487-00	MYLAR	0. 022uF	5%	50V
R425	1-249-441-11	CARBON	100K	5%	1/4W	C913	1-130-487-00	MYLAR	0. 022uF	5%	50V
R427	1-247-887-00	CARBON	220K	5%	1/4W	C914	1-130-487-00	MYLAR	0. 022uF	5%	50V
R428	1-249-429-11	CARBON	10K	5%	1/4W	C915	1-130-487-00	MYLAR	0. 022uF	5%	50V
R429	1-249-439-11	CARBON	68K	5%	1/4W	C916	1-126-936-11	ELECT	3300uF	20%	16V
R430	1-249-429-11	CARBON	10K	5%	1/4W	C917	1-124-477-11	ELECT	47uF	20%	25V
R431	1-249-441-11	CARBON	100K	5%	1/4W	C918	1-124-477-11	ELECT	47uF	20%	25V
R432	1-249-417-11	CARBON	1K	5%	1/4W	C919	1-124-903-11	ELECT	1uF	20%	50V
R440	1-249-437-11	CARBON	47K	5%	1/4W	C920	1-130-487-00	MYLAR	0. 022uF	5%	50V
R442	1-249-437-11		47K	5%	1/4W	C921	1-124-464-11		0. 22uF	20%	50V
R447	1-249-437-11	CARBON	47K	5%	1/4W	<b>1</b> €C922	1-161-744-00	CERAMIC	0. 01uF		400V
R451	1-247-887-00	CARBON	220K	5%	1/4W	C923	1-162-282-31	CERAMIC	100PF	10%	50V
R452	1-249-429-11	CARBON	10K	5%	1/4W	C927	1-124-907-11	ELECT	10uF	20%	50V
R460	1-249-421-11	CARBON	2. 2K	5%	1/4W	C928	1-124-907-11	ELECT	10uF	20%	50V
R464	1-249-429-11	CARBON	10K	5%	1/4W			< CONNECT	OR >		
R465	1-249-423-11	CARBON	3. 3K	5%	1/4W						
R466	1-249-436-11	CARBON	39K	5%	1/4W	CN90:	1-573-147-11	HOUSING,	CONNECTOR 12P		
R467	1-249-416-11	CARBON	820	5%	1/4W						
R468	1-249-417-11	CARBON	1K	5%	1/4W			< OUTLET	>		
R477	1-247-887-00	CARBON	220K	5%	1/4W	∕r\CNJ9€	1-540-059-11	OUTLET, A	C (POLAR) (US,	Canadia	an)
R478	1-249-429-11	CARBON	10K	5%	1/4W	<b>A</b> CNJ90	1-540-040-11	OUTLET, A	C (NONPOLAR)	(2P) (E)	)
R479	1-249-439-11	CARBON	68K	5%	1/4W	∕\CNJ90	2 1-540-059-11	OUTLET, A	C (POLAR) (US, O	Canadia	an)
R480	1-249-429-11	CARBON	10K	5%	1/4W		2 1-540-040-11				
R1001	1-249-417-11	CARBON	1K	5%	1/4W			( GODD )			
R1002	1-249-417-11	CARBON	1K	5%	1/4W			< CORD >			
		/ WIDDATOD \				_	1 1-574-902-11			)	
		< VIBRATOR >				\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	)1 1-590-771-11	CORD, POW	en (05, canadia	ai i /	
X301	1-579-125-11	VIBRATOR, CERA	MIC					< CONNECT	OR >		
*****	******	******	*****	*****	*****	* CNP90	2 1-573-565-11	PIN, CONN	ECTOR 5P (E)		
*		PS BOARD, COMP			dian)			< DIODE >			
		*****			****	D901	8-719-200-82	DIODE 1	1ES2		
						D902	8-719-200-82		1ES2		
*	3-309-144-21	HEAT SINK				D903	8-719-015-84		ZP-22BC		
						D904	8-719-200-82		1ES2		
		< CAPACITOR >				D905	8-719-200-82	DIODE 1	1ES2		
C901	1-126-104-11	ELECT	470uF	20%	35V	D906	8-719-200-82	DIODE 1	1ES2		
C902	1-124-913-11		470uF	20%		D907	8-719-200-82		1ES2		
C903	1-130-487-00		0. 022uF	5%	50V	D910	8-719-933-41		ZS6C3L		
C904	1-124-557-11		1000uF	20%		D911	8-719-200-82		1ES2		
C905	1-124-480-11		470uF	20%		D912	8-719-200-82		1ES2		
cone	1_10/_000_11	FIFCT	1E	อกพ	507	D012	Q_71B_900_00	DIODE 1	1500		
C906 C907	1-124-903-11 1-124-903-11		luF luF	20% 20%		D913 D914	8-719-200-82 8-719-987-63		1ES2 N4148M		
						The	components iden	tified hu	Les composant	e ider	ntifiée
						1	⚠ or dotted 1.		par une marqu		
							⚠ are critic		critiques pou		
							y. Replace only				e par une pièce
							number specifi		nortant le ni	-	

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### PS VIDEO

Ref. No.	Part No.	Description			R	emark	Ref. No.	Part No.	Description	n		Remar	k
D915 D916	8-719-987-63 8-719-933-41						R924	1-249-425-11	CARBON	4. 7K	5%	1/4W	
D917	8-719-933-41						R925	1-249-381-11	CARBON	1	5%	1/4W	
							R926	1-249-381-11	CARBON	1	5%	1/4W	
D918 D919	8-719-914-11 8-719-987-63						R930	1-249-421-11		2. 2K		1/4W	
D930	8-719-987-63						R931 R932	1-217-483-00 1-249-417-11		15 1K	5% 5%	1W F 1/4W	
D961	8-719-200-82						Rooz	1 210 117 11		111	0.10	1/ 111	
		< IC >							< RELAY >				
10901	8-759-604-39	IC M5F78M1	9					1-515-701-11 1-515-617-11		Canadian)			
	8-759-604-45		_				\(\frac{1}{4}\)(1301	1-313-017-11	NELAI (E)				
		/ MDANGTOMOD							< TRANSFOR	MER >			
		< TRANSISTOR	· >				A T001	1-450-845-11	TDANCEODME	D DUMED (III	Conoc	lion)	
Q902	8-729-900-63	TRANSISTOR	DTA124ES					1-450-846-11				11311)	
Q903	8-729-620-05		2SC2603-	EF			_			, , ,			
Q905 Q906	8-729-209-15 8-729-141-83		2SD2012	1 17					< CONNECTO	R >			
Q907	8-729-209-15		2SB1094- 2SD2012	ΓV			* VA901	1-564-321-00	PIN, CONNE	CTOR 2P			
Q908	8-729-900-63	TRANSISTOR	DTA124ES				******	******	******	*****	*****	******	**
Q909	8-729-801-93		2SD1387										
Q910 Q911	8-729-801-93 8-729-209-15		2SD1387 2SD2012				*	A-4347-300-A		D, COMPLETE ******			
Q912	8-729-620-05		2SC2603-	EF					*****	*****			
Q913	8-729-620-05	TRANSISTOR	2SC2603-	EF					< CAPACITO	R >			
Q914	8-729-119-76		2SA1175-				C500	1-124-927-11	ELECT	4. 7uF	20%	100V	
Q915	8-729-119-76		2SA1175-				C501	1-124-927-11	ELECT	4. 7uF	20%	100V	
Q916	8-729-620-05		2SC2603-				C502	1-124-927-11		4. 7uF	20%	100V	
Q930	8-729-900-36	TRANSISTOR	DTC124ES				C503	1-124-471-00		1000uF	20%	6. 3V	
		< RESISTOR >					C504	1-124-471-00	CLC01	1000uF	20%	6. 3V	
							C505	1-124-471-00	ELECT	1000uF	20%	6. 3V	
R900	1-247-842-11		3K	5%	1/4W	_	C507	1-161-494-00		0. 022uF		25V	
<u>1</u> R903 R905	1-215-888-00 1-249-425-11		220 4. 7K	5% 5%	2₩ 1/4₩	F	C508	1-124-927-11 1-124-477-11		4. 7uF	20%	100V	
/\R907	1-216-454-11		390	5%	2W	F	C509	1-124-4/7-11	ELECT	47uF	20%	25V	
R908	1-249-405-11		100	5%	1/4W				< CONNECTO	R >			
R909	1-249-423-11	CARBON	3. 3K	5%	1/4W		* CN501	1-569-798-11	PLUG, CONNI	ECTOR 6P			
R910	1-249-405-11	CARBON	100	5%	1/4W			1-564-336-00					
R911	1-249-429-11		10K	5%	1/4W		CN510	1-566-213-11	PIN, CONNEC	CTOR 4P (CON	TROL S	OUT)	
R912 R913	1-249-437-11 1-249-437-11		47K 47K	5% 5%	1/4W 1/4W				< DIODE >				
R915	1-249-417-11		1K				בחפת			11 4 Q <b>V</b>			
R916	1-249-417-11		47K	5% 5%	1/4W 1/4W		D803	8-719-987-63	אַנטאַנ אַנע	1148M			
R917	1-249-433-11		22K	5%	1/4W				< IC >				
R918	1-249-429-11		10K	5%	1/4W								
R919	1-249-429-11	CARBON	10K	5%	1/4W		IC500	8-759-991-77	IC BA7625	i			
R920	1-249-417-11	CARBON	1K	5%	1/4W				< COIL >				
R921	1-249-429-11		10K	5%	1/4W								
R922 R923	1-249-426-11 1-249-426-11		5. 6K 5. 6K		1/4W 1/4W		L500	1-410-977-11	INDUCTOR	100uH			
11343	1 433 44U-11	VAIDUN	J. ON .	J/n	1/47		Γ						
							mark <u>A</u> mark. <u>Z</u> safety.	ponents ident or dotted li name critica Replace only	ne with property of the left o	es composani par une marqueritiques pou le les rempla	ie 🕼 : ir la : acer q	sont sécurité. ue par un	

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### VIDEO VIDEO 4

	Part No.	Description			Remark
		< JACK >			
PJ500 PJ501	1-565-351-61 1-565-351-61	JACK, PIN 3P JACK, PIN 3P			
		< TRANSISTOR	>		
Q500	8-729-141-03	TRANSISTOR	2SA733-	-QP	
Q501			2SA733-	·QP	
Q502			2SA733-	•	
Q803	8-729-620-05	TRANSISTOR	2SC2603	B-EF	
		< RESISTOR >			
	1-247-804-11		75	5%	1/4W
R501			75	5%	1/4W
R502	1-247-804-11		75	5%	1/4W
R503			68	5%	1/4W
R504	1-249-429-11	CARBON	10K	5%	1/4W
R505	1-249-403-11	CARBON	68	5%	1/4W
R506	1-249-429-11	CARBON	10K	5%	1/4W
R507	1-249-403-11	CARBON	68	5%	1/4W
R508	1-249-429-11	CARBON	10K	5%	1/4W
R509	1-249-405-11	CARBON	100	5%	1/4W
R510	1-249-405-11	CARBON	100	5%	1/4W
R511	1-249-405-11	CARBON	100	5%	1/4W
R512	1-249-405-11	CARBON	100	5%	1/4W
R513	1-249-405-11	CARBON	100	5%	1/4W
R514	1-249-405-11	CARBON	100	5%	1/4W
R801	1-249-429-11	CARBON	10K	5%	1/4W
R807	1-249-417-11	CARBON	1K	5%	1/4W
R808	1-249-393-11	CARBON	10	5%	1/4W
******	*******	******	*****	*****	******
*	1-643-169-11	VIDEO 4 BOARI			
		< CAPACITOR >	>		
C220	1-124-907-11	ELECT	10uF	20	% 50V
		< CONNECTOR >	>		
► CN303	1-568-824-11	SOCKET, CONNE	CTOR 5P		
► CN303	1-568-824-11	SOCKET, CONNE	CTOR 5P		
	1-568-824-11 1-580-174-31	< JACK >			4 INPUT)
		< JACK >			4 INPUT)
PJ502	1-580-174-31	< JACK >  JACK, PIN (3F  < RESISTOR >	FRONT)	(VIDEO	
PJ502 R226		< JACK >  JACK, PIN (3F  < RESISTOR >  CARBON	FRONT)		

Ref. No.	Part No.	Description	Remark
*	1-643-171-11	VS BOARD (E) ************************************	
		< CONNECTOR >	
* CNP903	1-573-565-11	PIN, CONNECTOR 5P (E)	
		< switch >	
<b></b> \$901	1-572-009-11	SELECTOR, VOLTAGE (E)	
******	******	***********	*****
		MISCELLANEOUS ************************************	
9	1-590-036-11	WIRE, FLAT TYPE (13 CORE)	
		WIRE, FLAT TYPE (15 CORE)	
15 62	1-575-730-11 1-535-530-11	WIRE, FLAT TYPE (5 CORE)	
<u>1</u> 63		ADAPTER, CONVERSION 2P (E)	
******	*****	***********	*****
	ACCESSODIE:	S & PACKING MATERIALS	
		*************	
	1-465-712-11	COMMANDER, STANDARD (RM-P312) (I	JS, E)
	1-558-232-21	CORD (WITH CONNECTOR) (SIRCS) 4P	, .
	1-559-533-11	CORD, CONNECTION (US, E)	
	3-754-931-11	MANUAL, INSTRUCTION (ENGLISH/FI	RENCH) (E)
	3-754-931-21	MANUAL, INSTRUCTION (ENGLISH) (U	JS)
	4-925-079-01	COVER (6), BATTERY (US, E)	
*		INDIVIDUAL CARTON (US, E)	
*	4-944-501-01	CUSHION	

mark ⚠ or dotted line with mark. A are critical for safety. Replace only with part number specified.

The components identified by Les composants identifiés par une marque \Lambda sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.